

AMENDED SET OF CLAIMS

1. (Currently Amended) A method for producing a transfer sheet, which comprises the steps of:

(i) imaging a transfer sheet with sublimation dyes, wherein said transfer sheet comprises:

a support having a first and second surface, and

a barrier layer having a first and second surface, wherein the first surface of said barrier layer is applied to the first surface of said support, and wherein a sublimation dye image is applied to the second surface of said barrier layer; and

(ii) applying a first surface of a polyester layer, having a first and second surface, to said sublimation dye image applied to the second surface of said barrier layer, wherein said polyester layer comprises a polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said sublimation dye, provided that the polyester layer does not comprise thermosetting materials, and wherein said barrier layer allows for cold release of said sublimation dye layer and said polyester layer from said support after heat transfer.

2. (Currently Amended) A method of applying a sublimation dye image to a receptor element, which comprises, in the following order, the steps of:

(i) imaging a transfer sheet with sublimation dyes, wherein said transfer sheet comprises:

a support having a first and second surface, and

a barrier layer having a first and second surface, wherein the first surface of said barrier layer is applied to the first surface of said support, and wherein said sublimation dye image is applied to the second surface of said barrier layer;

(ii) applying a first surface of a polyester layer, having a first and second surface, to said image applied to the second surface of said barrier layer to produce a transfer sheet, wherein said polyester layer comprises a polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said sublimation dye, provided that the polyester layer does not comprise thermosetting materials, and wherein said barrier layer allows for cold release of said sublimation dye layer and said polyester layer from said support after heat transfer;

(iii) positioning the second surface of said polyester layer against said receptor element;

(iv) applying heat energy to the rear surface of the transfer sheet to transfer said sublimation dye image and said polyester layer to said receptor element, wherein said sublimation dyes sublime and penetrate into said polyester layer adhered to said receptor element; and

(v) stripping said transfer sheet away from said receptor element, wherein the sublimation dye image-containing polyester layer is adhered to said receptor element.

3. (Original) The method of claim 1 or 2, wherein said imaging is provided by ink jet, offset, gravure, flexographic, laser or screen printing.

4. (Original) The method of claim 1 or 2, wherein said support is selected from the group consisting of a paper support, a film support and cellulosic nonwoven webs.

5. (Original) The method of claim 4, wherein said film support comprises a polyester.

6. (Original) The method of claim 1 or 2, wherein said sublimation dyes are a four to eight color dye sublimation ink set.

7. (Original) The method of claim 1 or 2, wherein the polyester layer is applied by using gravure, cascade, metered rod, fountain or air knife coating methods.

8. (Previously Presented) The method of claim 7, wherein the heat energy is applied using a hand iron or a heat press.

9. (Original) The method of claim 2, wherein the receptor element is 100% cotton fabric or a cotton/polyester blend fabric.

10. (Original) The method of claim 2, wherein the receptor element is selected from the group consisting of ceramic, glass, wood, plastic and metal surfaces.

11. (Original) The method of claim 1 or 2, wherein the barrier layer comprises a polymer dispersion.

12. (Original) The method of claim 11, wherein the polymer dispersion comprises one or more of the components selected from the group consisting of polyacrylates, styrene-butadiene copolymers, ethylene-vinyl acetate copolymers, nitrile rubbers, poly(vinylchloride), poly(vinylacetate) and ethylene-acrylate copolymers.

13. (Original) The method of claim 12, wherein the polymer dispersion comprises polyvinyl acetate dibutyl maleate copolymer.

14. (Original) The method of claim 1 or 2, wherein said polyester layer comprises a (a) polyester or polyester/copolymer

blend, (b) an elastomeric emulsion, (c) a water repellant and (d) a plasticizer, wherein the polyester or polyester/polymer blend melts in the range of about 60°C to 270°C.

15. (Original) The method of claim 14, wherein said polyester or polyester/polymer blend is selected from the group consisting of polyacrylates, polyacrylic acid, polymethacrylates, polyvinyl acetates, copolymer blends of vinyl acetate and ethylene/acrylic acid copolymers.

16. (Original) The method of claim 14, wherein the polyester layer further comprises performance additives.

17. (Original) The method of claim 14, wherein said water repellant is a polyurethane dispersion and said plasticizer is polyethylene glycol.

18. (Currently Amended) A transfer sheet having a first and second surface, comprising

- (i) a support layer having a first and second surface,
- (ii) a barrier layer applied to the second surface of said support layer,
- (iii) a dye sublimation ink-containing layer applied to said barrier layer, and

- (iv) a polyester layer applied to said dye sublimation ink-containing layer, wherein said polyester layer comprises a polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said dye sublimation ink, provided that the polyester layer does not contain thermosetting materials,

wherein said barrier layer allows for cold release of said sublimation dye layer and said polyester layer from said support after heat transfer.

19. (Currently Amended) A method of transferring an sublimation dye image to a receptor element comprising:

- (i) providing a transfer sheet having a front and a back surface, which comprises, in the following order, the layers:
  - (a) a support,
  - (b) a barrier layer,
  - (c) a dye sublimation ink-containing layer, and
  - (d) a polyester layer, wherein said polyester layer comprises a polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said dye sublimation ink, provided

the polyester layer does not contain thermosetting materials, and wherein said barrier layer allows for cold release of said dye sublimation-ink containing layer and said polyester layer from said support after heat transfer;

- (ii) positioning the front surface of said transfer sheet against a receptor element;
- (iii) applying heat energy to the rear surface of the transfer sheet to transfer said sublimation dye image to said receptor element, wherein said sublimation dyes sublime and penetrate into said polyester layer adhered to said receptor element; and
- (iv) stripping said transfer sheet away from said receptor element, wherein the sublimation dye image-containing polyester layer is embedded in said receptor element.

20. (Original) A kit comprising at least one transfer sheet according to claim 18.

21. (Original) A kit according to claim 20, further comprising a receptor element.

22. (Currently Amended) A kit comprising:

- (i) a support layer having a first and second surface,
- (ii) a barrier layer applied to the second surface of said support layer,
- (iii) a marking agent containing at least one sublimation dye,

a polyester material to be applied to said marking agent, wherein said polyester material comprises a polymer that enters a secondary phase transition stage when heated to a temperature which is approximately the same as a sublimation temperature of said sublimation dye, provided that the polyester layer material does not contain thermosetting materials, and wherein said barrier layer allows for cold release of said sublimation dye and said polyester material from said support after heat transfer.

23. (New) The method of claim 1 or 2, wherein the barrier layer comprises a thermosetting polymer.